AMENDMENTS TO THE CLAIMS

1. (Currently amended) An image combination method, comprising the steps of:

image-combining high output image data and low output image data to form combined image data; and

if $p > \alpha - k \times (H / th)$, multiplying the combined data of the high output image data and the low output image data by a total gain that depends on a scene,

where

p denotes the total gain,

α denotes an arbitrary numeral,

k denotes a coefficient,

H denotes the high output image data after a gamma correction, and

th denotes the threshold value.

2. (Canceled)

3. (Canceled)

4. (Currently amended) An image combination method according claim 1~~3~~,

wherein the coefficient "k" = 0.2, the arbitrary numeral "α" = 1, the total gain p = "0.8" for high contrast scenes, the total gain "p" = 0.86 for cloudy or shady scenes, the total gain "p" = 0.9 for indoor scenes under fluorescent lamp illumination.

5. (Currently Amended) An image pickup apparatus, comprising:

an image-combining ~~means for image-combining~~unit that image-combines ~~a~~ high output image data and ~~a~~ low output image data to form combined data; and

a multiplying ~~means for multiplying~~unit that multiplies the combined data of the high output image data and the low output image data by a total gain that depends on a scene,

if $p > \alpha - k \times (H / th)$, wherein

p denotes the total gain,

α denotes an arbitrary numeral,

k denotes a coefficient,

H denotes the high output image data after a gamma correction, and

th denotes the threshold value.

6. (Canceled)

7. (Canceled)

8. (Currently amended) An image pickup apparatus according claim 5~~7~~,

wherein the coefficient "k" = 0.2, the arbitrary numeral "α" = 1, the total gain p = "0.8" for high contrast scenes, the total gain "p" = 0.86 for cloudy or shady scenes, the total gain "p" = 0.9 for indoor scenes under fluorescent lamp illumination.

9 - 17. (Canceled)

18. (Previously Presented) An image combination method according to claim 1,

wherein the total gain depends on a scene classification selected from a group of predetermined scene classifications.

19. (Previously Presented) An image combination method according to claim 18, wherein the scene classification is determined based on data detected by one or more sensors sensing the scene.

20. (Previously Presented) An image combination method according to claim 18, wherein the scene classification is determined based on a selection of a scene classification by a user.

21. (Previously Presented) An image combination method according to claim 1,

wherein the step of image-combining the high output image data and the low output image data is performed by partially replacing a portion of one of the high output image data and the low output image data with a portion of the other of the high output image data and the low output image data.

22. (Previously Presented) An image combination method according to claim 1,

wherein the step of image-combining the high output image data and the low output image data is performed by a logarithmic addition method.

23. (Previously Presented) An image pickup apparatus according to claim 5,

wherein the total gain depends on a scene classification selected from a group of predetermined scene classifications.

24. (Previously Presented) An image pickup apparatus according to claim 23,

wherein the scene classification is determined based on data detected by one or more sensors sensing the scene.

25. (Previously Presented) An image combination method according to claim 23,

wherein the scene classification is determined based on a selection of a scene classification by a user.

26. (Currently amended) ~~An image combination method~~ The image pickup apparatus according to claim 5,

wherein the image-combining ~~means~~unit image-combines the high output image data and the low output image data by partially replacing a portion of one of the high output image data and the low output image data with a portion of the other of the high output image data and the low output image data.

27. (Currently amended) ~~An image combination method~~ The image pickup apparatus according to claim 5,

wherein the image-combining ~~means~~unit image-combines the high output image data and the low output image data by a logarithmic addition method.

28. (Previously presented) An image combination method according to claim 1,

wherein the total gain is multiplied on the combined data of the high output image data and the low output image data in a range that the high output image data exceeds a certain value.

29. (Previously presented) An image pickup apparatus according to claim 5,

wherein the total gain is multiplied on the combined data of the high output image data and the low output image data in a range that the high output image data exceeds a certain value.

30. (New) An image combination method comprising:

combining high output image data and low output image data by the following formula to form combined image data

$$d = [H + MIN(H / th, 1) \times L] \times MAX[(-k \times H / th) + \alpha, p]$$

where

d denotes the combined image data,

p denotes the total gain,

α denotes an arbitrary numeral,

k denotes a coefficient,

H denotes the high output image data after gamma correction, and

L denotes the low output image data after gamma correction,

th denotes a threshold value,

wherein the total gain for controlling a dynamic range is experimentally determined for each scene in advance.

31. (New) An image pickup apparatus comprising:

an image combining unit that combines high output image data and low output image data by the following formula to form combined image data

$$d = [H + MIN(H / th, 1) \times L] \times MAX[(-k \times H / th) + \alpha, p]$$

where

d denotes the combined image data,

p denotes the total gain,

α denotes an arbitrary numeral,

k denotes a coefficient,

H denotes the high output image data after gamma correction, and

L denotes the low output image data after gamma correction,

th denotes a threshold value,

wherein the total gain for controlling a dynamic range is experimentally determined for each scene in advance.